

SUMMARY OF OPERATIONS ON CONTRACT NO. W-28-094-eng-33
FOR THE MONTH OF MAY 1948.

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Project I.* Basic studies on the effect of X-rays upon fish in various stages
of development.

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Sections I and II*

The chinook salmon fingerlings (F_2 generation) from the 1947 spawning of adults from irradiated (100 r) and control stock were marked during the month and their release to migrate to sea started.

The fingerling fish (F_2 generation) from 100 r stock were marked by the removal of the adipose and left ventral fins while the fingerling (F_2 generation) from the control stock are being marked by the removal of the adipose and right ventral fins.

Following the fin removal, for identification, the young fish are being held to give time for recovery from the marking and handling, before transporting them to the Samish River. From the Samish River the fish should migrate down to their normal feeding grounds in the sea. Those fish that survive we would expect to return in the fall of 1949-1950 or 1951. The progeny of this group (F_2 generation) will be carefully studied to determine the genetic changes that may occur.

The work up to date on the fish in these sections will be summarized and the data presented as a basic report.

Sections II a - II b

The young fish in these sections represent the survivors of the second generation (F_2) offspring of adult rainbow trout exposed to X-rays and spawned in 1945.

* Project and section numbers refer to the Project Chronology Chart and Summary, UNFL-9, revised March 11, 1948.

The entire lot of fish in these sections remaining alive were transferred to the large brood stock pond. In this large pond they will be able to develop to maturity, producing the F_3 generation in the spring of 1949.

Project V.

Laboratory experiments using Bikini "mud" and coral rocks as sources of fission products were summarized in last month's report. The studies have continued during the month of May.

The six aquaria holding flatfish, Parophrys vetulis, had one mortality, a control, which jumped out of aquaria #6 between May 20th and 22nd. It was replaced by a similar fish from the supply tank. The experiment with the flatfish living in aquaria with active Bikini mud and with active Bikini coral will be concluded in June, two months after initiating the work. Histological examination will be made of the kidney and spleen principally. In addition activity counts will be made of tissues from the fish living in the Bikini mud.

Project VIII. Cooperative project with the Hanford Engineering Works.

The exchange of services between the Atomic Energy Commission and General Electric Company, Nucleonics Project Richland, Washington, and the Applied Fisheries Laboratory, University of Washington, continues to operate smoothly.

During the month of May Mr. Richard F. Foster, Supervisor of 146 Building, Mr. W. K. Crane, Acting Chief, Research Branch, Mr. McCurtain and Mr. Gallagher, Security Office, of Richland visited the Applied Fisheries Laboratory.

Project IX.

During May Dr. Lauren R. Donaldson, took part in some of the experiments conducted at Eniwetok.

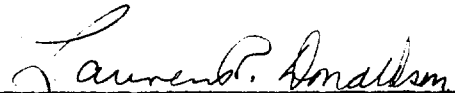
A small collection of aquatic life was collected north of Runit Island on May 16, 1948. The fish, snails, clams, algae, etc. in this collection were preserved and transported to the mainland for analysis.

The material is being ashed and counted at our Laboratory. Techniques developed during the periods working with Bikini material are being applied to this material.

A complete report on the data obtained will be prepared, in the near future.

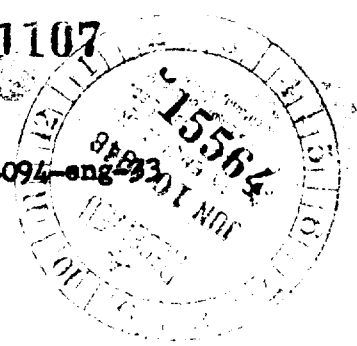
Project X. Bikini radiobiology resurvey, 1948.

Preparations for the resurvey of Bikini Atoll and adjacent areas are underway. The twelve (12) men that will compose the scientific personnel have been selected. Requests for security clearances and travel orders for the men have been made. The equipment needed by the expedition is being assembled at the Applied Fisheries Laboratory for shipment to Kwajalein where it can be loaded aboard ship.


Lauren R. Donaldson, Director
Contract No. W-28-094-eng-33

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Sections XI a - XI b

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